

Abstract of the Disclosure

An ion guide is installed in an intermediate chamber provided between a low vacuum chamber and a high vacuum chamber, and is located on a passage of transporting ions from the low vacuum chamber to the high vacuum chamber. The ion guide includes a plurality of plate-shape electrodes juxtaposed in a transport direction of the ions in the intermediate chamber and provided with ion passage holes around an ion beam axis, respectively; a plate-shape aperture electrode disposed as a part of partition for separating the intermediate chamber and an adjacent chamber and provided with an aperture around the ion beam axis; and high frequency power sources for applying high frequency electric voltages to the plate-shape electrodes and the aperture electrode, respectively.